

Project Update: May 2022

I/ Project summary

The project focus on the white-napped mangabey (*Cercocebus lunulatus*) an endangered primate species living in Comoé National Park. Unfortunately, this park experiences significant anthropogenic pressures, especially poaching, artisanal gold mining activities, habitat degradation and fragmentation. Updated information on the distribution status and viability of this species populations is important to develop sustainable conservation strategies and management plan to ban such illegal activities in the park. This project research will use reconnaissance survey, camera trap and phenology transect methods to assess the distribution status and viability of this species populations and its habitats, including interviews with key factors such as local community leader, ecoguides, hunters and park manager staff.



White-napped mangabey adult male in *Afraegle oaniculata* tree in Comoé National Park. © Couibaly Tchinyo, 23rd July 2021.

II/ Project objectives

1. Determine the spatial distribution of white-napped mangabey populations in the park.
2. Describe the ecological and anthropogenic factors that influence this distribution.
3. Describe the quality of habitats to assess their suitability.
4. Determine the population viability via assessing the relationships between species and the local communities living around the park.

III/ Introduction

I received the funds for my grant on 9th June 2021 to run my project in Comoé National Park (CNP) located at the north-east of Côte d'Ivoire. I began my project on 11th July 2021. Prior the inception of the project, on 6th May 2021 and 9th June 2021 I started by seeking the permits (access authorisation of the park and research authorisation) respectively from the Office Ivoirien des Parcs et Réserves (OIPR) and the direction of research and innovation of the Ministère de l'Enseignement Supérieur et de la Recherche Scientifique (MESRS) of Côte d'Ivoire, to avoid delays or obstacles during the project implementation. Before having access to the park, I had a meeting with the Director of the Direction de Zone Nord-Est (DZNE) of OIPR in charge of the CNP management based in Bouna city on 6th July 2021, who authorised me the park access. I also have meeting with my technical supervisor (the focal point in the staff of CNP managers).

The research project was planned to cover the whole park, i.e., the five management sectors established by OIPR (Bouna, Dabakala, Kong, Nassian and Téhini). However, for reasons beyond our control, field realities forced us to restrict our investigations to the southern part of the park covering only the Dabakala and Nassian sectors. There are two reasons for this change. Firstly, for security reasons in the north of the park linked to the Jihadist phenomenon, which had caused deaths in some villages located in the northern periphery of the park. The manager therefore asked us to work only in the low-risk area. The second reason is due to the fact that the target species only lives in the forests, in the CNP the majority of the forests are located in the south covering only the two sectors mentioned above. As a result, the present study takes place in the Dabakala and Nassian sectors.

IV/ Equipment receipt

After receiving the funds, I ordered 20 cameras traps (Browning Strike Force Max Plus), 20 Browning Max Plus Security Case, 20 Master lock Python Cable 6' and SanDisk 32 Gig SD card via the CSRS purchasing department at TrailCampro.com based in US on 3rd August 2021. The equipment was received on 8th November 2021 after a lengthy customs procedure lasting over 2 months at the Centre Suisse de Recherches Scientifiques (CSRS). This delay in the receipt of the equipment led to a delay in the installation of the camera traps, which was scheduled for September 2021 (initial planning). (Please see the photographs of the equipment in annexes).

Note: In addition to the 20 cameras traps purchased with Rufford funds, the Centre Suisse de Recherches Scientifiques provided us with eight Bushnell Low Glow cameras and the Direction de Zone Nord-Est de l'Office Ivoirien des Parcs et Réserves provided us with 20 other cameras, including 10 Bushnell HD Trophy Cam, eight Digital Trail Cam and two DORR Cam. The total number of camera traps for this study is 48.

V/ Project Progress

At this stage, we have conducted several trapping sessions for collecting data of primate distribution focused on the white-naped mangabey through the different types of forested habitats respectively in gallery forest and forest patches between November 2021 and March 2022 in Comoé National Park (CNP) during the dry season.

1. Camera traps sessions

Between 24th November 2021 to 28th March 2022, we carried out fieldwork during the dry season in Dabakala and Nassian sectors (Figure 1). We plotted on the map a grid of 1 km² cells, which we used as sampling unit for camera trapping. In each 1 km² cell, two camera traps were set up close to promising evidence, such as paths, feeding trees, natural bridges, water point, and the distance between devices was different to one sampling unit to another. Each camera was programmed to record video long one minute (60 s) and operated 24h/day. Cameras were laid at the same location lasting 1 month. We checked them monthly for collection of the videos recorded and cameras were uninstalled and installed in another sampling units. Three sessions of camera traps were made. Twenty-four camera traps were simultaneously deployed for the first session, 39 for the second session and 48 for the third session.

- First session: from 24th November 2021 to 31st December 2021, we installed a total of 24 camera traps (20 Browning Strike Force Max Plus cameras and four Bushnell Core Low Glow cameras) also in gallery forest and forest patches within 12 cells. For this session we recorded a total of 1 485 videos.
- Second session: from 8th January 2022 to 18th February 2022, we simultaneously deployed 39 cameras traps (20 Browning Strike Force Max Plus cameras, eight Bushnell Core Low Glow cameras, nine Bushnell HD Trophy cameras and two DORR cameras) to sample 20 grid cells, across gallery forest and forest patches. We recorded a total of 5 104 videos.
- Third session: from 20th February 2022 to 28th March 2022, we simultaneously deployed 48 cameras traps (20 Browning Strike Force Max Plus cameras, eight Bushnell Core Low Glow cameras and 10 Bushnell HD Trophy cameras, eight Digital Trail cams and two DORR cameras) to sample 24 grid cells, across gallery forest and forest patches. We recorded a total of 2 935 videos.

For these three sessions, 56 grid cells were sampled (30 cells in gallery forest and 26 cells in forest patches) and we are recorded a total of 9 434 videos. Among, the 56 sampling units of 1km², the white-napped mangabey was filmed in 32 cells (20 cells in gallery forest and 12 cells in forest patches), which represent 57,14% of the total sampling units almost done. To increase our chance to film the target species, the initial camera trapping protocol was updated.

Apart the target species (*Cercocebus lunulatus*), the camera traps filmed seven other species of diurnal primates except the black and white colobus (*Colobus vellerosus*). Several other species of large mammals were recorded. These included elephants, buffaloes, leopards, roan antelope, etc. Indeed, elephants damaged three of our camera traps, one of which was completely destroyed because the elephants stepped on it after cutting the strap. Fortunately, we were able to recover the SD card in very good condition. The three destroyed cameras are those of OIPR because they had no protective casing. In addition, videos of poachers were recorded both the day and night during the two last trapping sessions as well as in gallery forest and forest patches. (Please see the image in annexes)

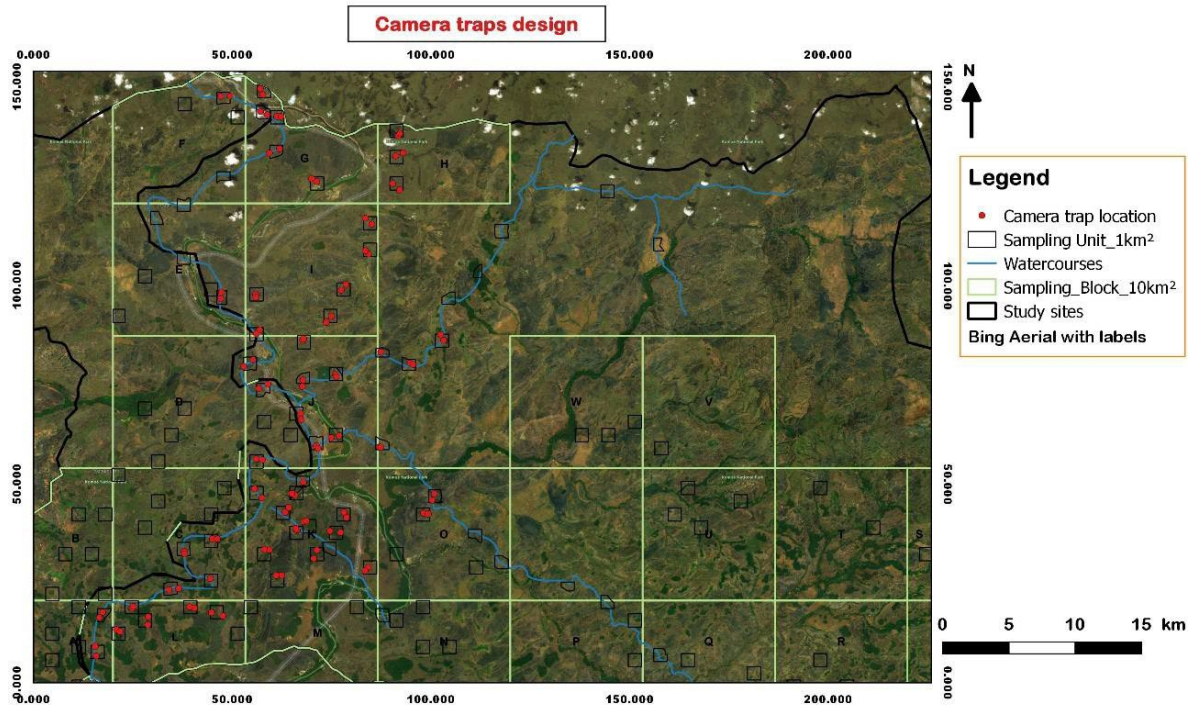


Figure1 : Camera traps location sampling sites in Comoé National Park, North-East of Ivory Coast

Author : COULIBALY TCHINYO
Date : 11/05/2022

The table below is the summary of the trapping session and camera trap performance during the three sessions in dry season.

Table 1: Trapping session and camera trap performance

Comoé National Park (CNP), north-east Côte d'Ivoire

Study site	Sampling session	Sampling cells planned	Sampling cells surveyed	Number of CT laid	Number of videos
Asian sector	Nov 21- Dec 21	95	12	24	1485
	Jan22 - Feb 22		20	39	5104
	Feb 22- Mar 22		20	40	2446
Dabakala sector	Feb 22- Mar 22	30	4	8	489
TOTAL		125	56	111	9434

2. Difficulties

There was a long delay in the procedures for purchasing and receiving the camera traps, i.e., more than 2 months in relation to the initial timetable, which was scheduled for October 2021 for the installation of the devices. In addition, the 20 camera traps that OIPR made available to us required the purchase of SD cards and batteries. We were only able to use them during the last two sessions. Unfortunately, in addition to the three damaged cameras, eight others had functioning problems (date, time and year change continuously). During the rainy season, the park becomes difficult to access and this could lead to a delay in the execution of the data collection during this rainy period. The large number of videos to be analysed

could probably lead a delay in the initial schedule (February 2023) to submit the final report (see section activities and time scale, initial project).

We had a problem with the assistant's per diem. The assistant is paid £7.62/day instead of £4.57/day as stated in the budget. To pay the assistant, I had to leave the field fees that should be used for my needs in the field, which allowed me to pay the assistant normally (£7.62/day) instead of the expected £4.57/day. At this stage, the funds obtained from your foundation will only be able to do one session of setting camera traps.

VI/ Upcoming project activities

Currently, we still continue to collect data for the rainy season from May to September 2022 later and complete the dry season data from November to December 2022 in order to have data on both sectors. We have started to input the data already collected during the dry season to make the first trends of the target species distribution in the CNP. After our analysis, those results will be compared with those obtained with the Recce method.

VII/ Annexes



Camera traps equipment purchased with Rufford funds.



i. Bushnell Low Glow. j. Browning Strike Force Max Plus. k. Bushnell HD Trophy Cam



l. Dorr. m. Digital Trail Cam.

Camera traps models used between November 2021 to March 2022



Two camera traps damaged (e, f) and one destroyed (g, h) by elephants at Comoé National Park.

Some images of the target species recorded both in gallery forest (i, j, k) and forest patches (l, m, n).



Cercopithecus lunulatus.

Some images of others primate's species recorded in CNP.



o. *Pan troglodytes verus* (forest patch). p. *Procolobus verus* (gallery forest). q. *Chlorocebus sabaeus* (gallery forest).



Cercopithecus petaurista (forest patch). t. *Cercopithecus lowei* (forest patch).

Image of others mammal's species recorded in Comoé National Park.



u. *Loxodonta cyclotis* (forest patch). v. *Hippotragus equinus* (forest patch). w. *Syncerus caffer*.



x. *Potamochoerus porcus* (forest patch). y. *Panthera pardus* (forest patch). z. *Cephalophus silvicultor* (forest patch).

Image of poachers in Comoé National Park.



u. Poacher with gun in gallery forest at daytime. v. Poacher with gun in forest patch at night.

Images of camera trap installation (1,2,3) and uninstallation (4,6,7).

